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CONTENTS

Discoveries and Current Events. — Germany: The Colorado Beetle Situation in 1939, p. 49. – Greece: Control of the Olive Fly, p. 50. – Southern Rhodesia: Locust Invasion, 1932-1939, p. 55.

Legislative and Administrative Measures. — Australia (Western Australia), p. 56. – Australia (Queensland), p. 56. – Burma, p. 56. – Chile, p. 56. – Straits Settlements, p. 56. – United States of America, p. 56. – Greece, p. 57. – Italy, p. 57. – Jamaica, p. 58. – Luxemburg (Grand Duchy of), p. 58. – Morocco (French Zone of), p. 59. – New Zealand, p. 59. – Nyasaland, p. 59. – Réunion, p. 60.

Recent Bibliography, p. 61.

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ACTIVITY OF THE INTERNATIONAL INSTITUTE OF AGRICULTURE

The radio communiqués of the International Institute of Agriculture are transmitted between 3.15 and 3.25 p. m. on the following days: Monday, Italian; ***Tuesday,*** French; ***Wednesday,*** English; ***Thursday,*** German; ***Friday,*** Spanish; ***Saturday,*** Russian.

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The hour of broadcasts is Central European Time, which is one hour ahead of Greenwich Mean Time and 5 hours ahead of Eastern Standard Time in the United States.

As in 1939, the activity of the International Institute of Agriculture and of its controlling bodies is continuing normally despite the present difficulties. Work is proceeding according to a plan based upon the financial and staff resources of the Institute.

Permanent Committee. — The Permanent Committee of the Institute will hold its first meeting of the year 1940 on Thursday, March 14 and the following days. The Committee will examine various questions relating to the internal and external activity of the Institute and, in particular, the preparations for the coming General Assembly which will open on May 20 at Rome, action on the resolutions of international congresses and meetings concerning agriculture, and the publications of the Institute.

XVth General Assembly of the Institute. — Information on this General Assembly was given in preceding numbers. It will open at Rome on Monday May 20, at 10 a. m. Most of the reports prepared for this Assembly have already been sent to the Member Governments and a number of the latter have submitted the names of their Delegates. In accordance with the custom which has been followed in the past, the Permanent Committee of the Institute will invite a number of important international organizations working in the agricultural field to send observers to follow the technical discussions of the General Assembly.

IIIrd Meeting of the International Forestry Centre. — The Committee of the International Forestry Centre set up by the Institute met at the Parliament House, Berne, on March 5, 6 and 7 for its third Session.

International Exhibition of Agricultural Films. — Some information on the *International Exhibition of Agricultural Films*, which the Institute has decided to organize on the occasion of the coming General Assembly, was given in the December number. A number of Governments have intimated that they will place some of the most interesting agricultural films made under their auspices at the disposal of the Institute for this exhibition. In addition, some Governments have given prizes in money or in kind to be awarded for the best films. Further information will be given in a later number.

BOOKS PRESENTED TO THE LIBRARY OF THE INTERNATIONAL INSTITUTE OF AGRICULTURE

Aberdeen. Macaulay Institute for Soil Research. Collected Papers. Edited by W. G. Ogg. Aberdeen, Scotland, [1930] 1938. 1 v.

1ª **Adunata** nazionale dei veterinari per la fecondazione artificiale 11-12 aprile 1939. Atti. Pavia, Tip. già cooperativa, 1939. 438 p.

Agenda forestier et de l'industrie du bois publié par la Société vaudoise de sylviculture avec la collaboration de l'Association forestiere vaudoise. Edition 1939, 1940. 32ème, 3ème année. Lausanne, V. Porchet, 1939, 1940. 2 v.

Agricultural Economics Society. Journal of Proceedings of the Agricultural Economics Society. Report of Conference held at St. John's College, Cambridge 30th June to 3rd July, 1939. [Reading, The Crown Press, 1939]. 103 p.

Almanacco italiano. v. 45.1940. Firenze, Marzocco, [1939]. 600 p.

Annuaire sucrier 1940 (campagne 1939/1940). 66ème année de publication. Paris, Bureau du Journal des fabricants de sucre, [1940]. LXXII, 700 p.

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Autarchia economica della Nazione. Roma, Istituto nazionale di cultura fascista, 1939. 85 p. (« Scritti di Ferruccio Lantini, Francesco Giordani, Giovanni Malquori, Giuseppe Tallarico, Raffaello Riccardi »).

Azzi, G. Trattato di ecologia agraria; l'ambiente fisico e la produzione agraria. Torino, Società editrice internazionale, [1939] 594 p.

Barberi, B. Indagine statistica sulle disponibilità alimentari della popolazione italiana dal 1922 al 1937. Roma, Failli, 1937, 98 p.

Becker-Dillingen, J. Die Ernährung des Waldes; Handbuch der Forstdüngung. Berlin, Verlagsgesellschaft für Ackerbau, [1939]. XVI, 589 p.

Boer, K. de. Als een toren in onze lage landen; gedenkschrift uitgegeven bij gelegenheid van het vijf-en-twintigjarig bestaan van de Coöperatieve groothandelsvereniging, de Handels-kamer « Haka » G. A., Rotterdam. Rotterdam, Handelskamer, 1939. 302 p. [A tour of our low plains; published for the 25th anniversary of the Wholesale Co-operative Trading Society, Handelskamer « Haka » G. A., Rotterdam].

Bonferroni C. E. Elementi di statistica generale (ristampa con aggiunte). Anno accademico 1938/39-XVII. Milano, Università commerciale Bocconi. Torino, Litrogr. F. Gilli, 1938. 320 p.

Borel A. Das bäuerliche Erbrecht des schweizerischen Zivilgesetzbuches. Hrsg. vom Schweizerischen Bauernsekretariat. Brugg, 1939. 360 p. (Mitteilungen des Schweizerischen Bauernsekretariates Nr. 122. 3. umgearb. Aufl. von Nr. 79).

Breirem, K. Vitaminer og mineralstoffe i husdyrenes ernæring. Oslo, Grøndahl & søns, 1938. [7], 212 p. (Grøndahl & søns landbruksskrifter nr. 18.) [Vitamins and mineral substances in the nutrition of domestic animals].

Brizi, A. Nota sul frazionamento fondiario giuridico-personale della zona Vesuviana. Roma, Tip. Operaia Romana, 1939. 78 p. (Estratto dagli Annali dell'Osservatorio di Economia agraria di Portici (Napoli). Vol. IV).

Brizi, A. La revisione degli estimi catastali dei terreni Firenze, Tipografia M. Ricci, 1940. 17 p. (Estratto dagli Atti della Reale Accademia dei Georgofili. 1939-XVIII).

INTERNATIONAL BULLETIN
OF PLANT PROTECTION

1940 No. 3

DISCOVERIES AND CURRENT EVENTS *

GERMANY

The Colorado Beetle Situation in 1939 †

The presence of the Colorado beetle (*Leptinotarsa decemlineata*) was established, during the course of the year 1939, in 12,206 places (14,128 places in 1938) in 2,381 communes ('Gemeinden') (2,510 communes in 1938) belonging to 170 different districts ('Kreise'). In 16 districts which were reported as being infested with the insect in 1938 no beetles were found in 1939.

The following table shows the distribuition of the infested communes:—

PRUSSIA.

Rhine Province:—		
District of Aachen	63	communes
,, of Düsseldorf	26	,,
,, of Koblenz	230	,,
,, of Köln	38	,,
,, of Trier	259	,,
Hessen–Nassau Province:—		
District fo Kassel	30	communes
,, of Wiesbaden	192	,,
Westphalia Province:		
District fo Arnsberg	11	communes
,, of Minden	2	,,
,, of Münster	4	,,
Hanover Province:—		
District of Lüneburg	4	communes

BAVARIA.

District of Palatinate	377	communes
,, of Lower Franconia	34	,,
,, of Middle Franconia	1	,,

* Under this and the next heading the countries are arranged in French alphabetical order.

† Communication from the Biologische Reichsanstalt für Land- und Fortstwirtschaft, Berlin-Dahlem, official correspondent of the Institute.

WÜRTTEMBERG.

91 communes

HESSE.

249 communes

BADEN.

District of Freiburg	322	communes
,, of Karlsruhe	107	,,
,, of Konstanz	82	,,
,, of Mannheim	66	,,

SAARLAND.

193 communes

51,491 beetles were found (47,772 on plants and 3,719 in the soil), 25,225 clusters of eggs, 1,002,240 larvae (960,757 on plants and 41,483 in the soil), and 13,959 nymphes.

The first adults were discovered on April 7 on a farm at Dossenheim, district of Heidelberg and on April 10 in a place near Dortmund. The Colorado beetle was also observed on April 22, 23 and 28 in Palatinate and Saarland, in each case however it was only a question of a single adult on the surface of the ground or in the soil but from May 20 onwards the number of observations increased.

The first egg-laying was recorded on May 30 at Mechtersheim, district of Speyer.

The first larvae were found at Bollendorf, district of Bitburg on June 5 and 6, on plants and on June 22, in the soil.

The first nymph was seen on June 25 at Weinheim, district of Mannheim.

The first adults of the new generation were discovered July 10 at Schifferstadt, district of Speyer.

The last adults were observed on November 13.

GREECE

Control of the Olive Fly *

As in former years, the control operations against the olive fly (*Dacus oleae*) were carried out during 1938 in the olive-growing districts where the expected harvest warranted the expense.

Number of Trees Treated.

In general, operations were only carried out in the districts or parts of these where olive production was 30 per cent. higher than the average yield.

* Communication from the official correspondent of the Institute, Mr. A. AYOUTANTIS, Chief of the Phytopathological Service, Ministry of Agriculture, Athens, Greece.

Following this principle, control was undertaken in the following Departments and on the number of trees indicated:—

Departments	Number of Trees
Aetolia and Arcanania	324,000
Argolis and Corinth	540,000
Arta	139,000
Attica and Boeotia	995,000
Achaia	466,000
Zante	590,000
Ellis	610,000
Heraklion	2,500,000
Thesprotia	150,000
Cavalla	850,000
Corfu	2,610,000
Cephalonia	755,000
Laconia	1,534,000
Lassithi	2,494,000
Messenia	4,300,000
Preveza	630,000
Rethymno	1,900,000
Samos	550,000
Phthiotis and Phocis	585,000
Canea	3,200,000
Chios	580,000
Total	26,500,000

A total of 26,500,000 trees treated out of approximately the 60,000,000 olive trees in Greece.

Control Method Employed.

The method employed in the control of *D. oleae* is to spray the trees with a small quantity of a mixture containing 10-15 % of cane molasses, 2.5 % sodium arsenite and 5 % ammonium sulphate.

General instructions for control operations were given by the Phytopathological Service of the Ministry of Agriculture. These instructions were sometimes slightly modified according to the local conditions of each region.

In past years, it was noted that spraying with the molasses-arsenic mixture, especially repeated spraying (as in the case of trees growing near *Dacus* foci) caused scorching of the leaves and fruits and thus more or less heavy damage. With a view to eliminating this disadvantage, bundles of branches of *Schinus* or other plants are hung on the olive trees which require repeated treatment, and spraying is carried out on these bundles instead of directly onto the foliage of the tree.

One point on which control efficacy depends is the exact date when spraying should be carried out and in which localities.

In order to ascertain date and locality, glass traps were hung on the olive trees, in the proportion of one trap to every 50 to 200 trees as required.

In the trap, a liquid was placed which attracts the *Dacus*, such as the molasses-arsenic mixture with 5 parts per thousand sodium arsenite and 5 parts per thousand ammonium sulphate.

In some districts, a simple solution of 5 per cent. ammonia in water was used. In many districts, it was preferred to the molasses-arsenic mixture which makes the traps very difficult to clean.

Every five days the number of *Dacus* individuals caught in the trap are counted and the mixture renewed.

From the absence or presence of the *Dacus* in the traps and the number found, the Chiefs of Section knew when to begin operations and which localities required treatment.

Organization of Control Operations.

(1) General instructions were given by the Phytopathological Service of the Ministry of Agriculture.

(2) The whole country was divided into 4 regions, each controlled by an inspector general who supervised the execution of the instructions given by the Ministry.

(3) In each Department, the Director of the district agricultural bank was in charge of *Dacus* control operations.

(4) The Department was subdivided into several inspection areas, one per province. The Chief of the Agricultural Service of the province supervised control operations in the inspection area in his province.

(5) Each inspection area was subdivided into several sections (from 2 to 5), with a maximum of 200,000 trees per section. Either an agricultural engineer or a graduate in agriculture, having had previous instruction in *Dacus* control, was placed in charge of control operations in each section.

(6) Each section comprised an average of five 'work-yards', a maximum of 40,000 trees being assigned to each.

Each work-yard was manned by of 8-10 workmen for spraying and those necessary for preparing the mixture used (1 workman and 1 assistant), transporting the mixture (2 workmen with 2 draught animals), for the eventual preparation and placing of the bundles of branches (number of workmen variable) and for attaching, washing, etc. the traps (1 workman with a draught animal and a child for hanging the traps on the trees).

Quantity of Material Employed in Control Operations.

Cane molasses	3,161,784	Kg.
Sodium arsenite	64,658	,,
Ammonium sulphate	115,784	,,
Sprayers	5,671	,,
Glass traps	146,515	,,

Cost of Control Operations.

Value of the material and apparatus employed or spoilt, including transport expenses	14,187,500	drachmae
Travelling expenses of employees (general inspectors, directors of control operations, inspectors)	1,901,200	,,
Travelling expenses of chiefs of section (agricultural engineers or others)	2,593,500	,,
Workmen's salaries	22,115,400	,,
Other expenses	884,900	,,
Total	41,682,500	drachmae

The money required for control operations was advanced by the Central Bank of Agriculture, Animal Husbandry and Forests and recovered by means of a tax levied on olive production in the Departments where control was carried out.

This tax amounted to 1 drachma 50 per oka (1.25 kg.) of olive oil produced and 1 drachma per oka of table olives exported.

Technical Staff and Workmen Employed in Control Operations.

General inspectors for technical supervision	4
General inspectors for administrative supervision	2
Directors in charge of control operations (one in each Department)	21
Inspectors	51
Chiefs of Section	171
Workmen:—	
(*a*) Overseers	795
(*b*) for preparing the mixture	795
(*c*) for spraying	8,000
(*d*) for preparing the bundles of branches	500
(*e*) for attaching, washing, etc. the traps	1,650
Total	11,740

Gain Resulting from the Measures Taken Against the Olive Fly.

With a view to ascertaining approximately the gain obtained through the control measures taken against *Dacus*, the managers of the district agricultural banks were requested to give information on the following points:—

(*a*) The quantity of olive oil and table olives produced in the districts where control operations were carried out.

(*b*) The quantity of oil and olives which, in their opinion, would have been produced in these districts if control measures had not been taken, taking into consideration the yields of the neighbouring districts having the same conditions but not carrying out *Dacus* control.

(*c*) The depreciation in the price of olive oil and olives because of *Dacus* attack, if control measures had not been taken, taking into consideration other factors, as in (*b*).

The results of this enquiry are summarized in the following table:—

	Oil			Olives			In millions of drachmae
	Metric tons	Price per kg. (drachmae)	Value in millions of drachmae	Metric tons	Price per kg. (drachmae)	Value in millions of drachmae	
Yield obtained and its value	61,955	20	1,239	17,082	8	136,6	1,375.6
Approximate yield if *Dacus* control measures had not been taken	45,819	17 ½	801.8	14,500	4 ½	65.3	867.1
Gain	—	—	—	—	—	—	508.5

Experiments for the Improvement of Control Methods.

As *Dacus* control is of primary importance for Greece both as regards the expenses involved and the resultant gain obtained, the Ministry of Agriculture decided last year to carry out extensive experiments with a view to supplementing the available information on the biology of the insect in Greece and also to improving the control method employed by ascertaining which sweet substances and ammoniacal salts were the most suitable for attracting *Dacus*, and by studying various other points regarding the material and apparatus used in control operations and organization in general.

The programme of experiments was drawn up by specialists approved by the Minister of Agriculture and carried out in four different regions of the country, *viz.*, Island of Crete, by the Director of the Plant Pathology Station of Patras; at Amphissa, by the Director of the Plant Pathology Station of Volos; Preveza and Corfu, by a Phytopathological Inspector.

The Ministry of Agriculture placed the sum of 2,500,000 drachmae at the disposal of the Phytopathological Service for the execution of the experiments, however, only 1,500,000 drachmae were expended, as owing to the conditions of olive production in Crete and Amphissa, it was not possible to carry out the experiments to the extent envisaged in the programme arranged.

The results of these experiments have not yet been worked out as there is still a considerable amount of data to be studied.

The only definite fact that stood out during these experiments in all the regions is that sugar-beet molasses attracts the olive fly much more than the best cane molasses, when utilized as bait in the glass traps.

SOUTHERN RHODESIA

Locust Invasion, 1932-1939 *

Monthly Report No. 83. October, 1939.

During October winged swarms of the red locust (*Nomadacris septemfasciata*, Serv.) have been reported in the following districts: Marandellas, Makoni, Melsetter, Belingwe, Gwanda, Bulalima-Mangwe, Matobo, Bulawayo, Bubi, Nyamandhlovu, Gwelo, and Sebungwe.

Most of the swarms have been described as from 'large' to 'very large', and some as 'very dense'.

It is not possible to say definitely how many swarms are concerned in these reports. The total may not be more than six.

The general trend of flight appears to be southerly with an easterly element.

All specimens examined still retained their red migrating colouration and breeding will not occur for some time yet.

Some damage to wheat and trees is reported in the Melsetter district.

Monthly Report No. 84. November, 1939.

Very few reports of locusts hav bee received during November an all refer to winged swarms of the red locust.

Nine reports have been received in all and six of these refer to districts adjacent to the eastern border, namely Darwin, Mtoko, Melsetter and Chibi. The remaining districts concerned are Charter, which is an eastern district, and Gwanda in the extreme south.

It would appear that considerably over three quarters of the Colony has been free from locusts during the month.

All but one of the swarms reported have been described as 'large' or 'very large'.

At the and of the month one sample of locusts from a swarm showed a change towards the yellow breeding colouration, with developed ovaries in the females.

No damage has been reported.

The prospects for the coming season are, at present, more favourable than in any year since the red locust commenced in 1932.

* Communication from the official correspondent of the Institute, Mr. Rupert W. Jack, F. E. S., Chief Entomologist, Agricultural Laboratory, Department of Agriculture, Salisbury, Southern Rhodesia.

LEGISLATIVE AND ADMINISTRATIVE MEASURES

Australia (Western Australia). — On October 27, 1939, double gee (*Emex australis*) has been declared to be a noxious weed within the boundaries of the Bunbury Road Board. (*Government Gazette of Western Australia*, Perth, November 3, 1939, No. 53, p. 1964).

Australia (Queensland). — The Act No. 8 of October 12, 1939, which may be cited as 'The Pest Destroyers Act of 1939', consolidates and amends the Law relating to the regulation of the sale of insecticides, fungicides, vermin destroyers, lures, weed destroyers, and sterilisers or cleansers. (*Queensland Government Gazette*, Brisbane, 18th October, 1939, No. 91, pp. 1355-1379).

Burma * — By Department Notification No. 376 of September 4, 1939 the importation of gram [*Cicer arietinum*] into Burma is prohibited absolutely.

Chile. — Decree No. 698 of October 18, 1939 lays down measures to prevent the introduction of the causal agent of 'arrebiatado' (*Dysdercus* sp.) into the country during the transit of cotton seed via Arica. (*Diario Oficial de la República de Chile*, Santiago, 4 de noviembre de 1939, año LXII, núm. 18,506, pág. 2930).

Straits Settlements. — By Ordinance No. 26 of September 11, 1939, which may be cited as the Export of Plants (Control) Ordinance, 1939, the Governor in Council may, by notice in the *Gazette*, prohibit the exportation from the Colony, or any part thereof, either absolutely or subject to such conditions as may be specified in the notice, or to any named country, territory or place, of any plant or part thereof which is capable of use for the propagation of such plant. (*Straits Settlements Government Gazette*, Singapore, September 15, 1939, Vol. LXXIV, No. 111, pp. 3813-3814).

United States of America. — Amendment No. 4 to the rules and regulations supplemental to Notice of Quarantine No. 71 on account of the Dutch elm disease [*Ceratostomella ulmi*], approved on September 6, 1939 and effective on September 11, 1939, brings under regulation for the first time, areas in Litchfield and New Haven Counties, Conn., Columbia and Ulster Counties, N. Y., and the entire county of Dutchess in New York. Extensions have been made to an area formerly under regulation in a county in Connecticut, two in New York, and five in New Jersey, placing the entire counties of Hunterdon and Mercer, N. J., and Putnam, N. Y., within the regulated area.

* From a communication of Mr. E. G. S. Apedaile, I. C. S., Deputy Secretary to the Government of Burma, Defence Department, Rangoon, to the International Institute of Agriculture.

The embargo with reference to the inter-state movement of elm material from the regulated areas is continued and restrictions have been added to limit the movement of such material from non-regulated area through regulated areas to the winter months and then only on a through bill of lading.

The Dutch elm disease has been discovered in a number of townships in Bucks and Northampton Counties, Pa. The State has placed an embargo on the movement of elm material therefrom and Federal quarantine action is withheld, thereby continuing the embargo on the movement of sources of infection from heavily infected sections of New Jersey into Pennsylvania. (*B. E. P. Q. — Q. 71*, [Washington, D. C.], 1939, 2 pp.).

*** Owing to the recent discovery of the pink cotton bollworm [*Platyedra gossypiella*] on okra [*Hibiscus esculentus*], by Amendement No. 1 to the revised regulations supplemental to Notice of Quarantine No. 52, approved on September 11, 1939 and effective on September 15, 1939, regulations 2, 3, and 4 are amended to add okra to the list of articles the inter-state movement of which is restricted from regulated areas. This Amendment also adds the Texas countries of Duval, Jim Hogg, La Salle, Maverick, Webb, and Zapata to the regulated areas because of the finding of new areas of infestation. (*B. E. P. Q. — Q. 52*, [Washington, D. C.], 1939, 3 pp.).

*** Additional infestations of the pink cotton bollworm [*Platyedra gossypiella*] having recently been located in Texas, the regulated area is further extended by Amendment No. 2 to the revised regulations supplemental to Notice of Quarantine No. 52, approved on September 23, 1939 and effective on September 25, 1939, to include the Texas counties of Dimmit, Frio, and Zavala, all lightly infested and all contiguous to former regulated area.

Amendment No. 1 approved on September 11, 1939 and effective on September 15, 1939 is superseded. (*B. E. P. Q.- — Q. 52*, [Washington, D. C.], 1939, 3 pp.).

Greece * — By Royal Decree of April 5, 1938 the Island of Lemnos is declared infested with grape phylloxera.

By Royal Decree of December 22, 1939, the Department of Larissa, with the exception of the Zagora region, is declared to be infested with phylloxera. The outside limits of the uninfested zone are given.

Italy. — By Royal Decree No. 2054 of September 22, 1939, an Agricultural Section of technical Institute of the Royal Agronomic Institute for Italian Africa is set up [see this *Bulletin*, 1939, No. 4, p. 85, and No. 5, p. 112]. This Section will specialise in colonial agriculture and train agricultural technicians for the Colonies.

* Communication from the official correspondent of the Institute, Mr. A. Avoutantis, Chief of the Phytopathological Service, Ministry of Agriculture, Athens, Greece.

Amongst the educational subjects tought at the above Section the diseases of colonial plants and zoology with special reference to colonial agriculture will be included. (*Gazzetta Ufficiale del Regno d'Italia*, Roma, 24 gennaio 1940, anno 81°, n. 19, pp. 316-317).

Jamaica. — The Law No. 21 of June 19, 1939, which may be cited as the Banana (Leaf Spot Control) Law 1939, affords assistance to the banana industry for the treatment of Cercospora leaf spot of bananas (*Cercospora musae*), and creates by means of a cess a reserve fund for the relief of the said industry. (*Jamaica Gazette Supplement*, August 3, 1939, Vol. LXII, No. 20, pp. 483-494).

Luxemburg (Grand Duchy of). — By a Decree of May 11, 1939 all landowners, tenants, farmers or occupiers of land, by whatever title, who have discovered the presence of the Colorado beetle (*Leptinotarsa decemlineata*) on their land, no matter what crop is being grown or in what form the insect is discovered, egg, larva nymph or the perfect insect; are bound to make an immediate declaration to that effect to the burgomaster of the commune wherein the land is situated.

The burgomaster must then at once inform the Minister of Agriculture at Luxemburg by telegram.

The occupier, whatever his title to the land, discovering the presence of the Colorado beetle is bound to ensure its destruction by applying one of the following treatments:—

(*a*) For field crops:— The infested crop should be sprayed with 5 per cent. calcium arsenate or diplumbic arsenate. These insecticides should remain in suspension for the leught of time necessary to carry out the treatment and should, further, fulfil the following conditions:—

Calcium arsenate: As. 25 ± 0.5 % minimum.
Soluble $As_2 O_5$ maximum 1.5 %.
Diplumbic arsenate: $As_2 O_5$ minimum 30 %.
Soluble $As_2 O_5$ maximum 0.5 %.

For lead arsenate pastes, all these requirements are reduced by 50 per cent.

(*b*) In gardens:— The infested crop should be treated with a derris or similar preparation containing 0.75 per cent. of rotenone.

Infractions of this Decree will be punished as laid down in Article 3 of the Law of March 15, 1892, dealing with the destruction of insects and plants harmful to agriculture.

At all times, the movement or maintenance of living Colorado beetles for whatever purpose is prohibited. Exceptions to this rule may be made by the Minister of Agriculture in connection with scientific work.

The transport of potatoes or other solanaceous plants, for whatever purpose, from land infested or suspected of being infested with Colorado beetle is prohibited.

The officials of the Plant Improvement Commission and the Phytopathological Service and persons acting on their instructions are to supervise the enforcement of this Decree.

In the case of neglect to carry out the measures laid down in this Decree within a reasonable time or neglect to carry them out at all, the necessary work will carried out on the responsibility of the burgomaster or a person appointed by him for the purpose, but at the expence of the delinquent, in accordance with the provisions of Article 4 of the Law of March 15, 1892.

The Ministerial Decree of February 27, 1936 [see this *Bulletin*, 1936, No. 7, pp. 157—158] relating to the control of the Colorado beetle is repealed. (*Mémorial du Grand-Duché de Luxembourg*, Luxembourg, 13 mai 1939, N° 37, p. 414-415).

Morocco (French Zone of). — By Decree of September 12, 1939, the Decrees of December 30, 1938, and July 6, 1939 [see this *Bulletin*, 1939, No. 4, p. 86, and No. 11, p. 265] permitting the destruction of rabits in the Rabat region and the territory of Port-Lyautey are repealed. (*Bulletin Officiel*, Rabat, 22 septembre 1939, XXVIII[e] année, N° 1404, p. 1497).

*** With regard to the control of the pink cotton bollworm [*Platyedra gossypiella*] and the spiny bollworm of cotton [*Earias insulana*], a Decree of January 8, 1940, lays down that the destruction of the stems, bolls, unharvested seed and in short all debris of the cotton plant must be completed before February 15, 1940. (*Ibid.*, 19 janvier 1940, XXIX[e] année n° 1421, p. 115).

New Zealand. — By Special Order made by the Awatere County Council on October 5, 1939 and published by the Minister of Agriculture on October 30, 1939, variegated thistle (*Silybum marianum*) is declared to be a noxious weed in the Awatere County. (*The New Zealand Gazette*, Wellington, November 2, 1939, Numb. 134, p. 3012).

Nyasaland. — By the Tobacco Pest Rules, 1939, published by Government Notice No. 44 of July 3, 1939, an officer may, at any reasonable time, enter into and inspect any building, factory, place or vehicle and may examine any article or receptacle used for the purpose of curing, storing, manufacturing, transporting or in any way connected with the handling of tobacco or other agricultural product for the purpose of ascertaining the presence or otherwise of a pest of tobacco (*Lasioderma serricorne*, *Ephestia elutella* and such other insect organisms or plant disease which the Governor may, by notice in the *Gazette*, declare to be a pest of tobacco).

It shall be an offence against these Rules for any person owning or having control of any building, factory, place, vehicle, article, or receptacle, whatsoever, used for the purpose of curing, storing, manufacturing, transporting or in any way connected with the handling of tobacco or other agricultural product, to fail to keep such building, factory, place, vehicle, article or receptacle free from a pest of tobacco.

An officer may direct any person owning or having control of any building, factory, place, vehicle, article, or receptacle to take such measures as may be necessary for the extermination of a pest of tobacco or to prevent it spreading,

or may himself take such measures as he may deem fit, at the owner's expense, for the eradication of the pest; and in so doing he may order the immediate destruction without compensation of any tobacco or other agricultural product whether in transit or otherwise. (*Supplement to The Nyasaland Government Gazette*, Zomba, 10th July, 1939, Vol. XLVI, No. 24, pp. 51-52).

Réunion. — To avoid the danger arising from the introduction into the Irland of cassava [*Manihot*] from regions where the plantations are attacked by mosaic disease, the importation, circulation, warehousing and transit of cassava plants, cuttings and seed from whatever country is prohibited by a Decree of the Minister for the Colonies dated February 5, 1940.

Exceptions may be granted in special cases for the introduction of cassava plants, cuttings or seed from any country by a decision of the Minister for the Colonies on a recommendation from the Governor of Réunion. Such a decision will determine the conditions under which the importation may take place and will specify the quantity of plants, cuttings or seeds that may be imported.

Exceptions will only be granted for plants, cuttings or seeds, the importation of which is considered to be of a real technical or economic value.

All plants, cuttings or seeds admitted under such an exception may only be forwared by official channels and the cost of transport must be refunded by the importer.

Authority to import, circulate or warehouse or even for transit across Réunion can only be granted by the Customs Office at Pointe-des-Galets on production of the ministerial permit for importation. It is only granted on production of a certificate as to the condition of the plants from the phytopathological service of the country of origin and after examination by an official of the Agricultural Service showing the products to be healthy and free from any parasites.

Every suspect lot is to be siezed and burnt at once and at the expense of the importer.

Every lot admitted will enter into the charge of the Agricultural Service which will cultivate them in quarantine in the Botanical Garden at Saint-Denis and keep them under observation for 15 months.

If a plant shows signs of disease during the quarantine period, all the plants from the same consignment and of the same variety will be uprooted and burnt without compensation to the importer.

Plants released from quarantine will be cultivated by the importers in a place sanctioned by the Agricultural Service and placed under the supervision of the Service during a further period of 15 months.

No cutting may be taken from the plants without permission of the Agricultural Service.

Any lot including a diseased plant must be uprooted and burnt without any compensation to the owners. (*Journal officiel de la République française*. Paris, 16 février 1940, LXXII[e] année, n° 46, p. 1190).

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